



Australian Government

ICTCBL252 Joint and terminate coaxial cable

Release: 1

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Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to install, joint and terminate coaxial cable in the customer access network (CAN) environment for emerging technologies using high speed broadband and the delivery of cable television services on customer premises for domestic, commercial or industrial installations.

It applies to technical staff who joint and terminate coaxial cable used in all telecommunications applications, including convergence technologies of telephony, data, video and multimedia as part of next generation networks (NGNs).

Licensing, legislative, regulatory and certification requirements apply to telecommunications systems. All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media Authority (ACMA) accredited registrar. Refer to the ICT Information and Communications Technology Training Package Companion Volume Implementation Guide or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – Cabling

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install and joint coaxial cable	1.1 Confirm approval for site access with customer prior to site entry 1.2 Read and interpret customer installation specifications and physical conditions at site to determine layout of job 1.3 Locate and identify adjoining other services according to enterprise guidelines and work health and safety (WHS) practices

ELEMENT	PERFORMANCE CRITERIA
	1.4 Test for and respond to presence of dangerous gases in underground enclosures according to enterprise guidelines 1.5 Undertake approved alterations to design according to enterprise guidelines
2. Verify placement and secure coaxial cable	2.1 Use safety equipment to protect self and public 2.2 Maintain coaxial cable segregation to industry standard requirements 2.3 Protect integrity of coaxial shield cable to ensure no loss of performance 2.4 Place cable in position with sufficient slack to allow termination and maintain minimum bend radius according to manufacturer specifications 2.5 Follow installation designs to install cable safely without damage to cable or customer premises 2.6 Maintain radio frequency (RF) signal strength by installing cable lengths within manufacturer or design specifications 2.7 Locate securing hardware to reduce cumulative effect on cable wave shape properties and attach cable ties to minimise cable damage
3. Joint coaxial cable	3.1 Strip coaxial cable, according to specifications, to required length using appropriate tools 3.2 Select appropriate kit to match type of coaxial cable in use and jointing method according to manufacturer recommendations 3.3 Joint cable and ensure jointing fitting retains segregation of conductor and shield 3.4 Seal all joints according to manufacturer specifications
4. Terminate coaxial cable	4.1 Prepare coaxial cable for termination according to specifications using appropriate tool 4.2 Select connectors to match type of coaxial cable in use and use terminating method recommended by manufacturer 4.3 Verify connector fitting retains segregation of conductor and shield 4.4 Terminate connectors to torque as recommended by manufacturer to prevent RF leakage 4.5 Test connectors to mating specifications using gauge tester 4.6 Maintain continuous ground on terminations and waterproof seal to preserve cable integrity

ELEMENT	PERFORMANCE CRITERIA
5. Complete installation operation	5.1 Place cables in enclosure and lay up according to manufacturer instructions and enterprise guidelines, and check that no safety hazards are evident 5.2 Place other services including cables according to enterprise guidelines 5.3 Reinststate site, remove waste and debris for disposal, and maintain safe worksite conditions
6. Complete installation administration	6.1 Complete reports according to enterprise policy 6.2 Note alterations to plans using appropriate symbols

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance, but not explicit in the performance criteria.

Skill	Description
Reading	Reads familiar texts fluently, automatically recognising most everyday words and some specialised vocabulary
Writing	Sequences writing to produce cohesive text and uses layout consistent with text type
Oral Communication	Demonstrates awareness of choices for register, especially in situations that are familiar
Numeracy	- Interprets and comprehends whole numbers and familiar or routine fractions, decimals and percentages - Selects and uses appropriate tools, hand-held devices, computers and technological processes
Navigate the world of work	- Takes responsibility for decisions regarding when and how to complete tasks, and coordinate with or delegate to others - Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context, and draws attention to any issues that may affect self or others
Get the work done	- Implements actions as per plan, makes slight adjustments if necessary, and addresses unexpected issues - Automatically implements standard procedures for routine decisions

Unit Mapping Information

ICTCBL252 Joint and terminate coaxial cable supersedes and is equivalent to ICTCBL209 Joint and terminate coaxial cable.

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTCBL252 Joint and terminate coaxial cable

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Performance Evidence

The candidate must demonstrate the ability to perform the tasks outlined in the elements, performance criteria, and foundation skills, and to:

- determine installation requirements, and check and prepare the site ready for coaxial cable installation
- perform an in-line splice
- perform jointing and termination of coaxial cable using specialised hand or power tools and equipment
- complete waterproof jointed cable using heat shrinkage
- apply related work health and safety (WHS) requirements and work practices
- conduct signal strength tests and interpret results
- fit jointed coaxial cable in suitable housing
- check and adjust cable segregations
- verify the installation complies with enterprise and manufacturer specifications and warranties
- document work according to enterprise requirements.

Note: Evidence must be provided at least once when a specific volume or frequency is not stated.

Knowledge Evidence

The candidate must demonstrate the knowledge required to perform the tasks outlined in the elements, performance criteria, and foundation skills, which includes knowledge about:

- relevant legislation, regulations, codes, standards, enterprise guidelines, formal agreements and contracts that impact on the work activity
- specific WHS requirements and environmental procedures relating to the activity and site conditions, including site security and typical safety issues and challenges that occur on site
- range of coaxial cables and connectors and their application

- information required to operate equipment according to a test specification
- features and operating requirements of test equipment
- manufacturer requirements for selection, installation and safe operation of equipment
- test methods and performance requirements
- impact that other services may have on installation work
- operation of tools relevant to working with coaxial cable
- environmental requirements for waste and debris disposal.

Assessment Conditions

Skills must be assessed in a workplace or simulated environment where conditions are typical of those in a telecommunications work environment or workplace.

Access is required to:

- site/s where jointing coaxial broadband cable can be conducted
- special purpose tools, equipment and materials currently used in industry such as joint testing equipment
- relevant regulatory and equipment documentation that impacts on cable jointing and testing activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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